

## A TAPE MANUFACTURING SYSTEM

## ABSTRACT OF INVENTION

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A tape manufacturing system and a tape-surface-inspection unit are disclosed. The tape-surface-inspection unit is capable of continuously characterizing the surface of a non-transparent tape that is usable with or without a tape manufacturing system. The  
10 tape-surface-inspection unit includes a surface illuminator, an imager, an image processor, a tape guide, and, optionally, an indexer. The surface illuminator provides a tape surface located by the tape guide in a manner that allows the imager to capture images for characterization by the image processor. The indexer facilitates a correlation of locations along the tape and a characterization of the locations on the tape. The tape manufacturing system, in addition to at least one  
15 tape-surface-inspection unit, includes a tape-processing unit, a tape handler, and a controller.